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THE ELEMENTARY SCHOOL TEACHER

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A COMPARATIVE STUDY OF THE GRADES OF THE PUPILS FROM THE DIFFERENT WARD SCHOOLS BASED UPON THE FIRST YEAR IN HIGH SCHOOL

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The investigation which is described in part in this paper was undertaken for the purpose of presenting to the principals and teachers of the elementary school an impersonal statement of the position which the pupils promoted from the different ward schools occupied in the high school. The record of some pupil—very good, or very poor—has not infrequently given currency to a general impression of the efficiency of a particular center in the elementary school. The method pursued in this study was intended to correct any such traditional and inadequate conceptions as might grow up by chance remarks, by a careful analysis which would portray the facts with reference to all the pupils of a given center. A comparative account of the grades of the pupils who entered the high school in September, 1909, was prepared. At the close of the first semester, 190 pupils from an entering class of 230 were in school, and it was the record of these pupils which formed the basis of this study. (The practice in Kansas City is to promote pupils twice a year. The class entering in January, 1910, was studied in the same manner. Approximately 20 ward schools carry the work of the entire course of the elementary school.)

The material was arranged so that the results could be exhibited graphically. In order that comparisons might be

easily made, tables and diagrams were provided for each principal. Each diagram contains a series of three graphic representations of the grades in English, algebra, and Latin respectively. English and algebra are prescribed for all pupils the first year in high school. Of this class 70 per cent chose Latin. These three subjects are used in presenting this study. Four grades are employed in ranking pupils. They are the Arabic numerals 1, 2, 3, and 4; 3 is the lowest passing mark; 4 is a failure. The abscissal line in each diagram is divided into four parts, each part representing a grade. The first in order is the highest grade given. The number of pupils receiving the respective grades is tabulated below the grades in the diagrams, and following this tabulation there will be found the percentage of grades. The percentage of grades, i.e., the 1's, 2's, 3's, and 4's, is represented on the ordinate lines. For example, in Diagram I, in English, 61 pupils received a grade of 1; 70, a grade of 2; 26, a grade of 3; and 25, a grade of 4. Reducing to a percentage basis, we have 34 per cent, 38 per cent, 14 per cent, and 13 per cent respectively. These facts are exhibited graphically under the subject of English.

The general averages for the 190 pupils who finished the first semester (18 weeks) of high-school work are presented in Diagram I. This diagram is the basis of comparison in each of the following cases. Incidentally, this diagram was the occasion for a productive line of discussion among the teachers of the high school. The percentage of failures in English and algebra, the character of the curve in algebra, the large number of 1's in English as contrasted with the 1's in algebra, the ability of the pupils who take Latin were topics suggested and discussed. Are pupils better prepared to take up English than algebra? Is algebra a suitable subject for first-year mathematics in the high school? What is the relation between the Latin and English work? Who are the failures, i.e., do pupils fail in one, two, or more subjects, or is there any correspondence existing between failures in English and Latin? These and similar questions were raised, and there were evidences of a desire to approach the study of the problems presented in a scientific manner. Any hasty

verbal statement of explanation was challenged at once. Many of the same questions were raised by the principals and teachers of the elementary school. Is there any evidence of poor work in arithmetic in the grades from the report in algebra in the high school? was a question discussed with enthusiasm. The main line of interest, however, centered around the comparative study of the respective ward schools.

Diagrams II–VII inclusive represent six of the ward schools and illustrate the method of comparison which was adopted in this study. The grades of the pupils from the different ele-

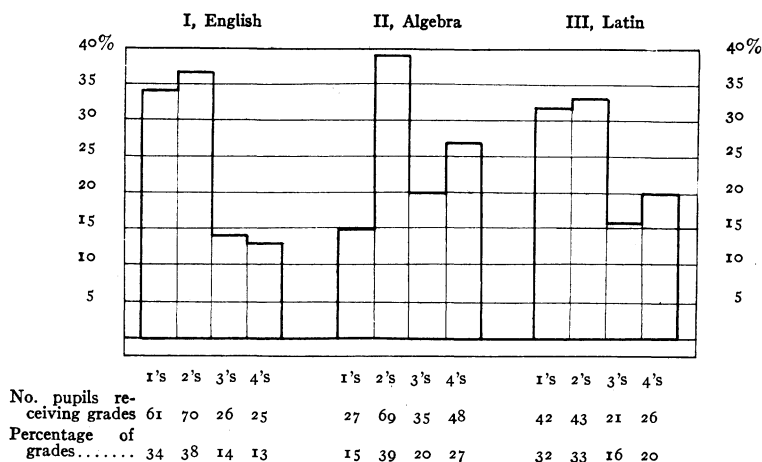


DIAGRAM I.—Freshman class, 190 pupils of the 230 who entered September 1909, High School, Kansas City, Kan.

mentary-school centers are graphically exhibited in the three subjects pursued in the first year of the high school. In each instance, the number of pupils who entered from the particular ward school is given. The tables are made up for those who remained in the high school one-half year. Diagram II indicates that the pupils from Ward School A rank with the average of the Freshman class with a high degree of consistency. In algebra, there is a striking similarity. The failures are practically the same in all three subjects.

Diagram III presents marked deviations from II. The pupils did remarkably well in English. This fact suggested that the

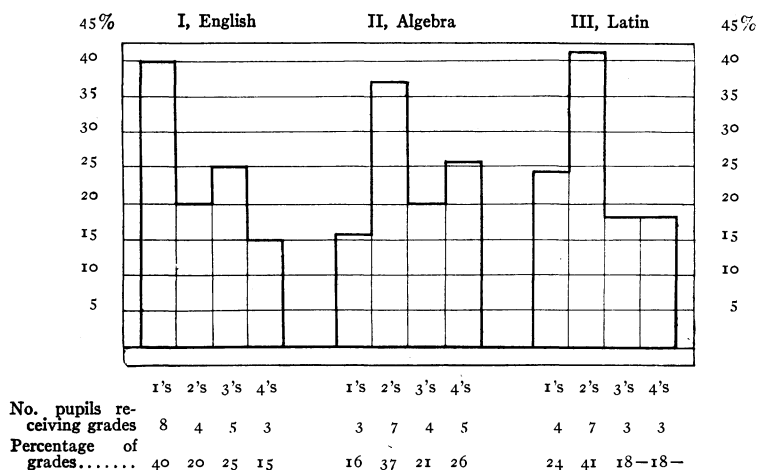


DIAGRAM 2.—Freshman class, 19 pupils of the 23 who entered from Ward School A.

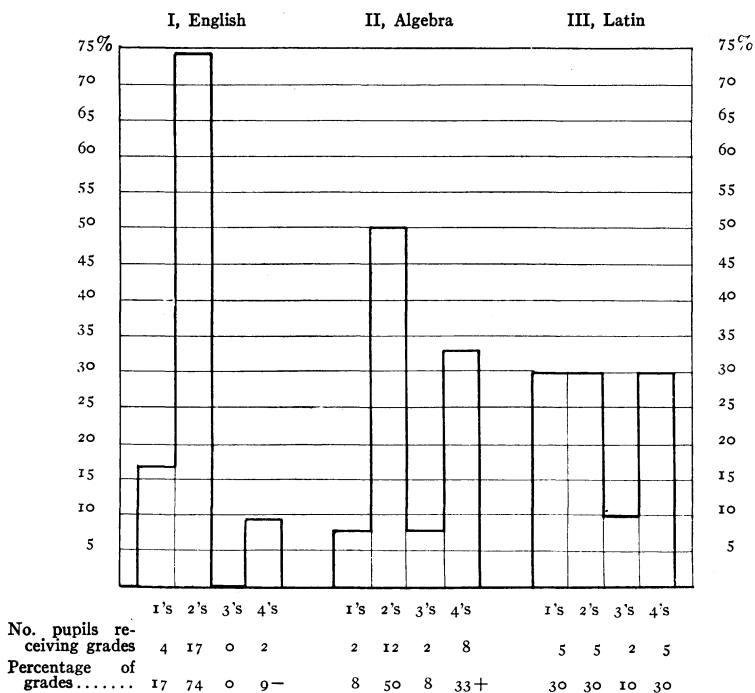


DIAGRAM 3.—Freshman class, 24 pupils of the 28 who entered from Ward School B.

language work in this center was strong. An examination of the grades in algebra and Latin would indicate that School B sends to the high school two classes of pupils—one group fairly good and the other not thoroughly prepared to take up the advanced grade of work. The lowest passing grade, 3, has a low percentage and marks clearly the dividing line between the two groups from this ward school.

Diagram IV indicates that the pupils from School C maintained a standing above the average, especially in English and Latin. In algebra 65 per cent of the grades fall within the high

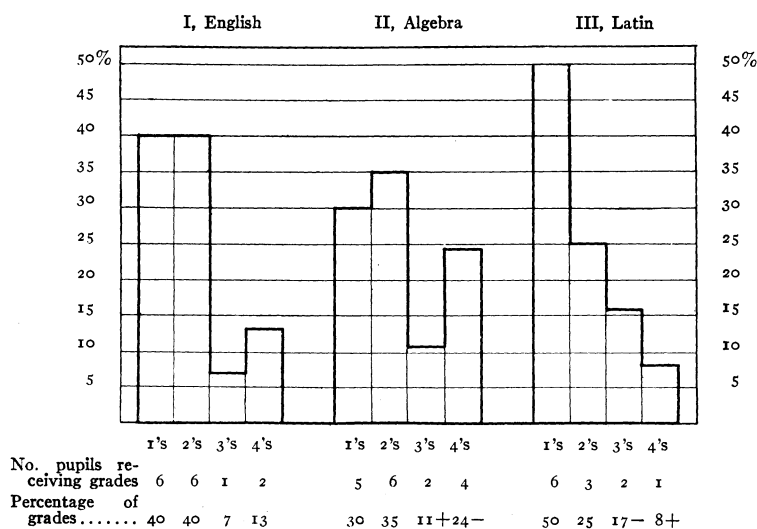


DIAGRAM 4.—Freshman class, 17 pupils of the 19 who entered from Ward School C.

grades, 1's and 2's. This school is located in a district where it would be expected that a better grade of pupils would be found than in B.

Diagram V represents a school still more favorably situated. The record in English is high. No low grades are recorded against these pupils. There is a low percentage of failure in algebra and none in Latin. In all cases where a splendid showing of this character was made, there were clear indications of self-congratulations upon the excellent work the teachers of these ward buildings were doing.

Diagram VI stands in sharp contrast. There were no grades in any subjects in the highest order. The percentages of failures were high. The number dropped out during the term was 6 out of an enrolment of 16. The condition of this school can be accounted for in part from the location. The community is made up of a large number of people who work at manual

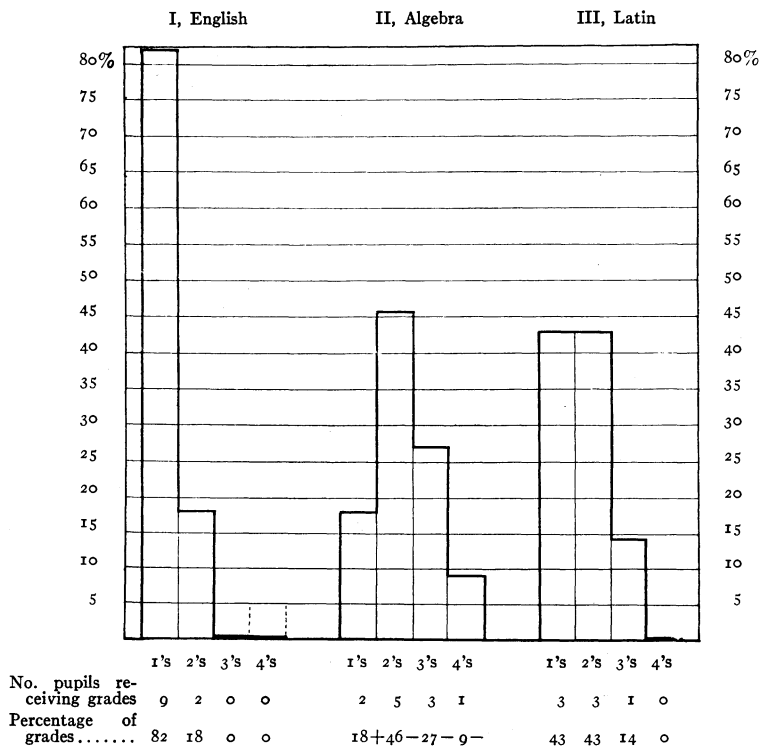


DIAGRAM 5.—Freshman class, 11 pupils of the 11 who entered from Ward School D.

labor. The foreign element predominates. The principal and teachers of this ward school did not resent a showing of this kind. They felt that it was complimentary that as many pupils as there were made the effort to attend high school.

Diagram VII suggests that there was a selection of pupils taking Latin. In fact, a careful analysis of any curve raises numerous questions relating to the efficiency of the elementary

school, the selection of studies in the high school, and the standards in both the elementary and high schools in the different subjects.

Diagram VIII is given for the purpose of indicating the fallacy of mere verbal statement in the attempt to account for school conditions. This school was located outside the city limits when this study was made. There were 5 pupils who entered high school and remained throughout the year. This

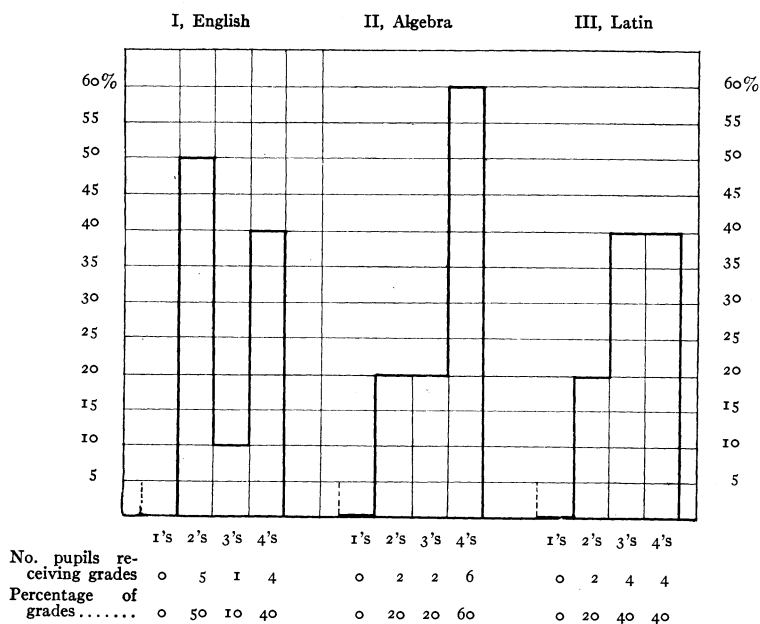


DIAGRAM 6.—Freshman class, 10 pupils of the 16 who entered from Ward School E.

remarkable showing is exhibited graphically. No 3's or failures were found. There is a preponderance of 1's in all the subjects. There was another school similarly situated which made exactly the opposite showing. A large percentage dropped out of high school; those who remained made low grades; and in two subjects there was 100 per cent of failures. To set up the claim that the latter school made a poor record because there was no supervision, such as the city afforded its elementary school, is a poor argument when the former school as represented in Diagram VIII is

under consideration. The conditions were the same in respect to lack of close supervision. It is not clear which of these two schools is to be regarded as the exception. A further analysis of these schools was at once suggested.

The statement is often made in teachers' meetings that pupils from the rural schools and other towns do or do not rank favorably with the pupils promoted directly from the elementary

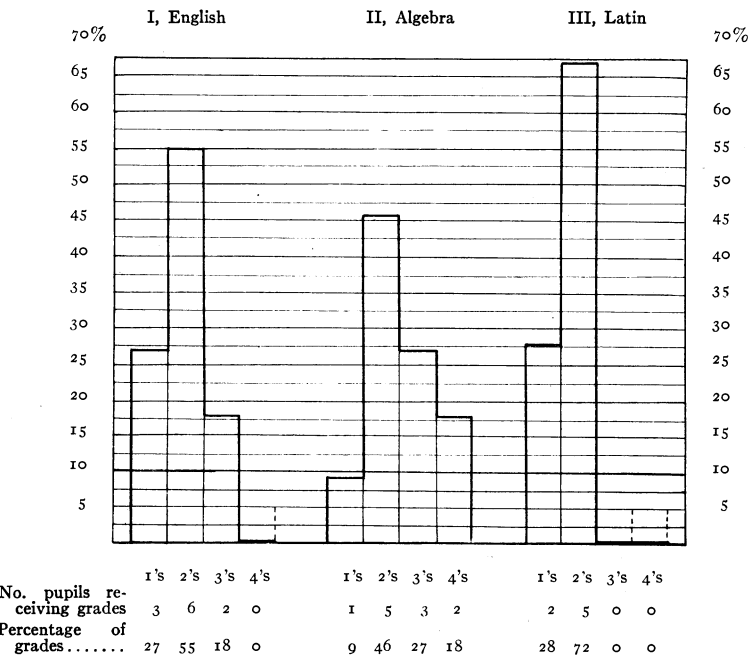


DIAGRAM 7.—Freshman class, 11 pupils of the 11 who entered from Ward School F.

school to the high school in a city system. Diagram IX compared with Diagram I reveals a striking similarity in many details. One of the surprising facts is the ranking of this miscellaneous group in English. Pupils from the rural schools are usually considered below the average in ability in language and above the average in ability in mathematics. When the attention of the language teachers in the high school was called to the facts as portrayed in Diagram IX, the explanation was offered that the pupils of the rural schools have a better knowl-

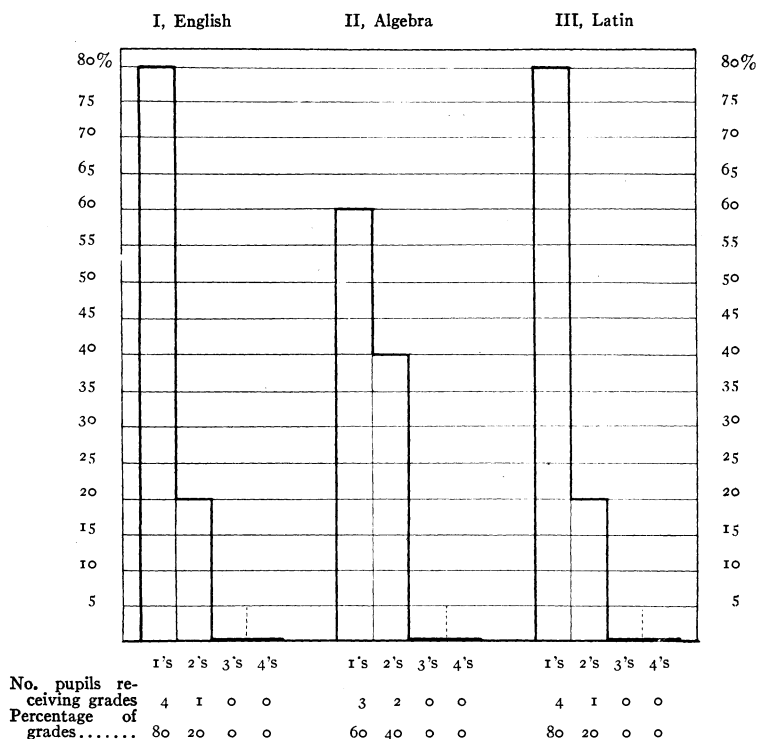


DIAGRAM 8.—Freshman class, 5 pupils who entered from Ward School G.

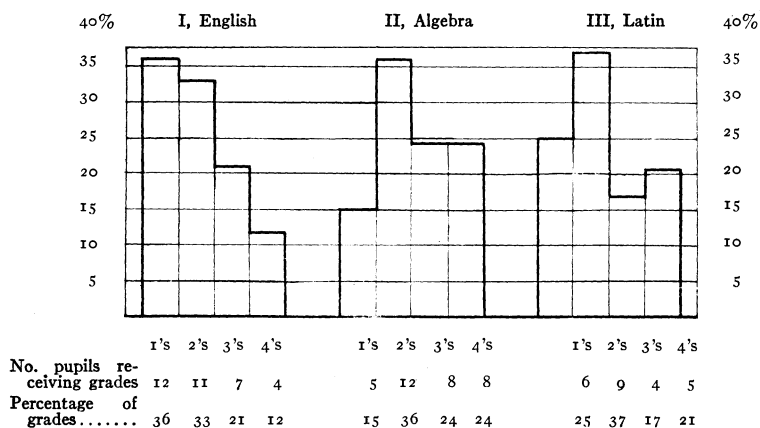


DIAGRAM 9.—Freshman class, 33 pupils of 39 who entered from rural schools and other cities.

edge of technical English grammar than the city pupils and that this fact enabled them to keep step with the pupils of the city who might have a more varied training in the classics.

No attempt has been made in this presentation to exhaust the discussion which these simple graphic representations aroused. Only a few characteristic curves have been reproduced in this paper. The method it is hoped has been adequately suggested in the meager discussion of a few typical examples. It should be remembered that this type of investigation and report proved quite as stimulating to high-school teachers as to the elementary teachers and principals. The effect of such an impartial presentation of the facts was on the whole very satisfactory. The professional spirit in which the principals of the ward schools received the report gave evidence of the value of this kind of study of elementary-school problems. It is believed that comparisons of this character each year will tend to establish a scientific attitude in the administration of school systems. Instead of relying upon chance remarks here and there concerning the efficiency of a ward school, the method suggested in this study enables principals to make accurate comparisons, and by filing each year a convenient graphic report of this sort there would be no difficulty in determining the position which the various ward schools maintain in the high school. Fluctuations from term to term could be investigated more intelligently in the light of such facts. This is a concrete illustration of the use which can be made of office records in stimulating a productive type of study of school problems. Moreover records reduced to the form suggested in this paper afford a convenient means of reference and comparison from year to year within the high school itself. It is not improbable that the character of the graph would be modified materially on account of the personnel of the teaching corps or changes in the course of study. Teachers and principals of the elementary school are encouraged to study the work of the high school quite as freely as their work is studied by the high-school teacher. Such impersonal methods as suggested above may become the means of stimulating investigation of problems of mutual interest in our school systems.